

[4310-55]

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

[50 CFR Part 17]

ENDANGERED AND THREATENED WILDLIFE
AND PLANTS

Proposed Listing and Critical Habitat Determination for Two Hawaiian Cave Arthropods

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The Service proposes to determine the Kauai cave wolf spider (*Adelocosa anops*) to be an Endangered species and the Kauai cave amphipod (*Spelaeorchestia koloana*) to be a threatened species. Critical Habitat is proposed for both species. This action is being taken because of their decreased population levels and threatened modification of their habitat. The proposed action, if finalized, would protect the populations of these two arthropods and their habitat. Neither species is known to exist outside the State of Hawaii.

DATES: Comments from the public must be received by August 15, 1978. Comments from the Governor of Hawaii must be received by September 14, 1978.

ADDRESSES: Submit comments to Director (OES), U.S. Fish and Wildlife

interior, and materials received will be available for public inspection during normal business hours at the Service's Office of Endangered Species, Suite 1100, 1612 K Street NW., Washington, D.C. 20240.

FOR FURTHER INFORMATION CONTACT:

Mr. Keith M. Schreiner, Associate Director—Federal Assistance, Fish and Wildlife Service, U.S. Department of the Interior, Washington, D.C. 20240, 202-343-4646.

SUPPLEMENTARY INFORMATION:

BACKGROUND

Section 4(a) of the Endangered Species Act of 1973 (16 U.S.C. 1533(a)) states:

General.—(1) The Secretary shall by regulation determine whether any species is an endangered species or a threatened species because of any of the following factors:

- (1) the present or threatened destruction, modification, or curtailment of its habitat or range;
- (2) overutilization for commercial, sporting, scientific, or educational purposes;
- (3) disease or predation;
- (4) the inadequacy of existing regulatory mechanisms; or
- (5) other natural or manmade factors affecting its continued existence.

This authority has been delegated to the Director.

SUMMARY OF FACTORS AFFECTING THE SPECIES

These findings are summarized herein under each of the five criteria of section 4(a) of the Act. These factors, and their application to the two Hawaiian invertebrates, are as follows:

KAUAI CAVE WOLF SPIDER

1. *The present or threatened destruction, modification, or curtailment of its habitat or range.* The Kauai cave wolf spider is known to exist only in Koloa Cave No. 2, located on the southeast coast of the island of Kauai. Koloa Cave No. 2 is presently subject to considerable alteration via such human activities as introduction of debris and destruction of tree roots and other food sources of the spider. Moreover, this lava cave extends under neighboring sugar cane fields in which fluctuating irrigation practices further threaten the survival of the spider and the cave's ecosystem in general.

2. *Overutilization for commercial, sporting, scientific, or educational purposes.* Not applicable to this species.

3. *Disease or predation.* This factor is not known to affect the present status of this species.

4. *The inadequacy of existing regulatory mechanisms.* There currently are

no State or Federal laws protecting this species or its habitat.

5. *Other natural or manmade factors affecting its continued existence.* None.

KAUAI CAVE AMPHIPOD

1. *The present or threatened destruction, modification or curtailment of its habitat or range.* The terrestrial amphipod *Spelaeorchestia koloana* is now known to exist only in two lava tubes, Koloa Caves Nos. 1 and 2, in close proximity to one another near Koloa (Kauai, Hawaii) and in a small limestone cave, Limestone Quarry Cave, 7 km. away. The two lava tubes are listed and marked as civil defense fallout shelters and are well known by the public. Direct human impact on these caves has increased significantly since completion of a nearby highway. Increased visitations and direct human disturbances, as described in the previous discussion of the wolf spider, could ultimately destroy the lava tube ecosystems and cause extirpation of the amphipod. Limestone Quarry Cave, the only other known locality for this amphipod, is being destroyed by quarrying.

2. *Overutilization for commercial, sporting, scientific, or educational purposes.* Not applicable.

3. *Disease or predation.* This factor is not known to affect the present status of this species.

4. *The inadequacy of existing regulatory mechanisms.* There currently are no State or Federal laws protecting this species or its habitat.

5. *Other natural or manmade factors affecting its continued existence.* None.

CRITICAL HABITAT

Section 7 of the Act, entitled "Inter-agency Cooperation", states:

The Secretary shall review other programs administered by him and utilize such programs in furtherance of the purposes of this Act. All other Federal departments and agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of endangered species and threatened species listed pursuant to section 4 of this Act and by taking such action necessary to insure that actions authorized, funded, or carried out by them do not jeopardize the continued existence of such endangered species and threatened species or result in the destruction or modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with the affected States, to be critical (16 U.S.C. 1536).

A definition of the term Critical Habitat was published by the Fish and Wildlife Service and the National Marine Fisheries Service in the *FEDERAL REGISTER* of January 4, 1978 (43 FR 870-876), and is reprinted below:

"Critical habitat" means any air, land or water area (exclusive of those existing man-

made structures or settlements which are not necessary to the survival and recovery of a listed species) and constituent elements thereof, the loss of which would appreciably decrease the likelihood of the survival and recovery of a listed species or a distinct segment of its population. The constituent elements of critical habitat include, but are not limited to: physical structures and topography, biota, climate, human activity, and the quality and chemical content of land, water, and air. Critical habitat may represent any portion of the present habitat of a listed species and may include additional areas for reasonable population expansion. (50 CFR 402.02, 43 FR 874-875).

The regulations for Interagency Cooperation published on January 4, 1978, (43 FR 870), also provide that "[t]he Director will consider the physiological, behavioral, ecological, and evolutionary requirements for survival and recovery of listed species in determining what areas or parts of habitat * * * are critical. These requirements include, but are not limited to:

- (1) Space for individual and population growth and for normal behavior;
- (2) Food, water, air, light, minerals, or other nutritional or physiological requirements;
- (3) Cover or shelter;
- (4) Sites for breeding, reproduction, or rearing of offsprings; and generally,
- (5) Habitats that are protected from disturbances or are representative of the geographical distribution of listed species." (50 CFR 402.05, 43 FR 876).

The application of the above definition and factors to the areas proposed as critical habitat for the Kauai Cave Wolf Spider and Kauai Cave Amphipod is as follows:

KAUAI CAVE WOLF SPIDER

This species is known to occur only in Koloa Cave No. 2 on the island of Kauai. This cave is the deepest and wettest lava tube known in the Koloa area. The cave trends downslope from the small entrance 150 m to a final muddy crawlway. Evaporation from the entranceway is minimal. Seepage is supplied by rain and by irrigation. The main energy input into the cave food chain is tree roots; the tree roots provide food to various animals which in turn provide food for the wolf spider. The area proposed as critical habitat for this species represents the only known locations for this species.

KAUAI CAVE AMPHIPOD

This species is currently reported to exist in two lava tubes (Koloa Caves Nos. 1 and 2) in close proximity to one another near Koloa (Kauai, Hawaii) and in a small limestone cave (Limestone Quarry Cave) 7 km away. Koloa Cave No. 1 is a relatively large lava tube. A walkway leads downslope approximately 150 m and ends in a crawlway. The floor is composed of a thick layer of clay. Koloa Cave No. 2 is the deepest and wettest lava tube

known in the Koloa area. The cave trends downslope from the small entrance 150 m to a final muddy crawlway. Evaporation from the entranceway is minimal. Seepage is supplied by rain and by irrigation water. Limestone Quarry Cave is a large elevated sea cave with subsequent erosion by a still-active, freshwater stream. It was formed in an extremely hard, calcareous sandstone hill. The floor is composed of fine calcareous sand with piles of stream-deposited organic debris. The main energy input into food chains of these caves is tree roots; detritus from the tree roots provides food for the amphipod.

Thus, the available evidence indicates that Koloa Cave No. 2 is critical habitat for the wolf spider, and that Koloa Cave No. 1, Koloa Cave No. 2, and Limestone Quarry Cave are critical habitat for the amphipod. If, during the public comment period, new information is made available, these areas proposed as critical habitat for the two species may be modified to more accurately reflect the species' physiological, behavioral, ecological, and evolutionary requirements.

It should also be pointed out that the areas delineated do not necessarily include the entire critical habitat of these species and modifications of their critical habitat designations may be proposed in the future.

In accordance with section 7 of the Act (16 U.S.C. 1536), all Federal departments and agencies would be required to insure that actions authorized, funded, or carried out by them would not result in the destruction or adverse modification of the critical habitat of the Kauai cave wolf spider and the Kauai cave amphipod.

Also in accordance with section 7 of the Act, Federal agencies would have to consult with the Secretary of the Interior with respect to any action considered likely to result in the destruction or modification of the species' critical habitat. Consultation pursuant to section 7 would be carried out using the procedures contained in the "Interagency Cooperation Regulations" which were published in the *FEDERAL REGISTER* on January 4, 1978 (50 CFR 402.04, 43 FR 875-876).

EFFECT OF THE RULEMAKING

In addition to the effects discussed above, the effects of this rulemaking would include, but would not necessarily be limited to, those mentioned below.

The Act and implementing regulations published in 50 CFR Part 17 already set forth a series of general prohibitions and exceptions which apply to all Endangered species. All of these prohibitions and exceptions also apply to any Threatened species unless a special rule pertaining to that Threatened species has been published and indicates otherwise.

With respect to the Kauai cave wolf spider and the Kauai cave amphipod all prohibitions of section 9(a)(1) of the Act, as implemented by 50 CFR 17.21, and 17.31 would apply. These prohibitions, in part, would make it illegal for any person subject to the jurisdiction of the United States to take, import or export, transport in interstate or foreign commerce in the course of a commercial activity, or sell or offer for sale either species in interstate or foreign commerce. It would also be illegal to possess, sell, deliver, carry, transport, or ship the animals if they had been taken illegally. Certain exceptions would apply to agents of the Service and State conservation agencies.

The Act and 50 CFR Part 17 also provide for the issuance of permits to carry out otherwise prohibited activities involving Endangered or Threatened species under certain circumstances. Such permits are available for scientific purposes or to enhance the propagation or survival of the species. In some instances, permits may be issued during a specified period of time to relieve undue economic hardship which would be suffered if such relief were not available.

Pursuant to section 4(b) of the Act, the Director will notify the Governor of Hawaii with respect to this proposal and request his comments and recommendations before making final determinations.

PUBLIC COMMENTS SOLICITED

The Director intends that the rules finally adopted will be as accurate and effective as possible in the conserva-

tion of all species. Therefore, any comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, private interests or any other interested party concerning any aspect of these proposed rules are hereby solicited. Comments particularly are sought concerning:

(1) Biological or other relevant data concerning any threat (or the lack thereof) to these species;

(2) The location of and reasons why any habitat of these species should or should not be determined to be Critical Habitat as provided for by section 7 of the Act;

(3) Additional information concerning the range and distribution of either species.

Final promulgation of the regulations on the Kauai cave wolf spider and Kauai cave amphipod will take into consideration the comments and any additional information received by the Director and such communication may lead him to adopt final regulations that differ from this proposal.

An environmental assessment is being prepared in conjunction with this proposal. When completed it will be on file in the Service's Office of Endangered Species, 1612 K Street NW., Washington, D.C., and may be examined during regular business hours. A determination will be made at the time of final rulemaking as to whether this is a major Federal action which would significantly affect the quality of the human environment within the meaning of section 102(2)(C) of the National Environmental Policy Act of 1969.

The primary authors of this proposed rulemaking are Ginter Eklis and Paul Opler, Office of Endangered Species, 202-343-7814.

REGULATIONS PROMULGATION

Accordingly, it is hereby proposed to amend Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, as set forth below:

1. It is proposed to amend § 17.11 by adding, in alphabetical order, the following to the list of animals:

§ 17.11 Endangered and threatened wildlife.

Species		Range			Status	When listed	Special rules
Common name	Scientific name	Population	Known distribution	Portion endangered			
Crustaceans:.....							
Amphipod, Kauai cave ('uku noho ana).	<i>Spelaeorchestia koloana</i>	N/A	U.S.A. (Hawaii).....	Entire.....	T	N/A
.....							
Common sponges and other forms:							
Spider, Kauai (pe'e pe'e maka 'ole).	<i>Adelocosa anops</i>	N/A	U.S.A. (Hawaii).....	Entire.....	E	N/A

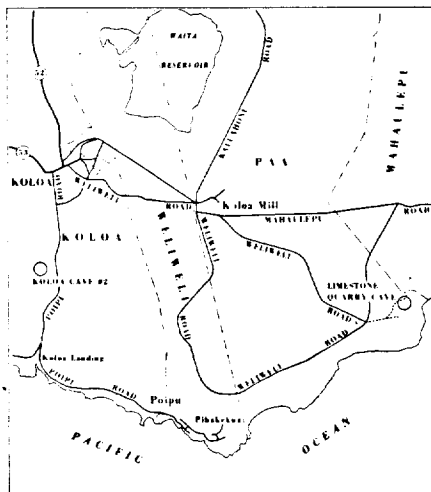
2. Also, the Service proposes to start a new § 17.95(h) by adding Critical Habitat of the Kauai cave amphipod as follows:

(h) *Crustaceans.*

KAUAI CAVE AMPHIPOD

(*Spelaeorchestia koloana*)

Hawaii. Kauai County, Koloa Cave No. 2 and Limestone Quarry Cave.



3. Finally, the Service proposes to amend § 17.95(j) by adding Critical

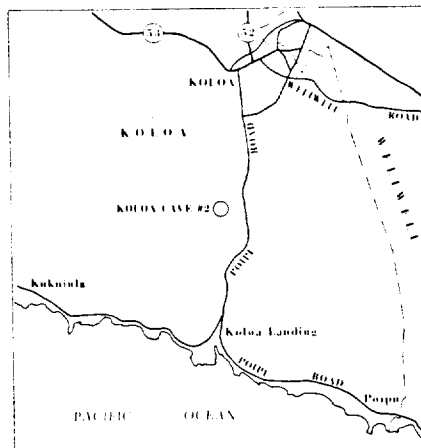
Habitat for the Kauai cave wolf spider as follows:

(j) *Common Sponges and other forms.*

KAUAI CAVE WOLF SPIDER

(*Adelocosa anops*)

Hawaii. Kauai County, Koloa Cave No. 2.



NOTE.—The Service has determined that this document does not contain a major proposal requiring preparation of an Economic Impact Statement under Executive Order 11949 and OMB Circular A-107.

Dated: May 25, 1978.

LYNN A. GREENWALT,
Director, Fish and
Wildlife Service.

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